

March 27, 1956

Dear Ckive:

I haven't the time instantly to write you all the news I owe you, and am so befogged I can't remember whether I may already have written you this request, but we urgently need a new batch of serums (H: i, b, 1.2, enx) and would much appreciate the favor again.

What the befogment and hurry is about is simply that we've just moved back into Genetics, after spending since Thanksgiving at the Bacteriology Building. Meanwhile they've remodelled our labs, somewhat as follows.

This is a much more efficient layout, with some innovations such as built in ring-oblique light illuminators in the desks.

The main scientific news that would interest you, I think, is the completion of the phase variation analysis. It looks quite definite that  $H_2$  exists in two hereditary "states", 'epistatic' and 'hypostatic' if you like, which are responsible for phase-2 and phase-1 respectively. The main experiment behind this is *S. abony* —x *S. typhimurium* (and vice versa) in the four combinations (donor, recipient, phase-1 and ph-2), in the presence of anti-i and 1.2. You get the following set of results (and the qualitative summary is remarkably well backed up by the counts):

abony 1	TM 2	//	abony 1	TM 2	//	abony 2	TM 1	//	abony 2	TM 2
b:1.2			nothing			b:1.2 and i:enx			i:enx	

Presumably, in the cases where one of the two transduction results is missing, (or both) it comes out in the wrong phase, e.g., i:enx, which is suppressed by the serum. We have direct substantiation of this for inactive "H", by expts. involving the Fla- $H_1$  linkage, and selecting only for Fla<sup>+</sup>. We wish we had a similar linked marker for  $H_2$ , but don't.

Did you get the Perelman book? Actually I bought it for you for Xmas 1954, but insisted on reading it myself before sending it on to you. And thanks for so much trouble in transshipping Brighton Rock: Now we know what it is. Best wishes, etc,

Sincerely,